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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,688	10/03/2001	John Coogan	024444-938	6445

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BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

TRUONG, THANH K

ART UNIT	PAPER NUMBER
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3721

DATE MAILED: 07/15/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

N.K.

Office Action Summary	Application No. 09/857,688	Applicant(s) COOGAN ET AL.	
	Examiner Thanh K Truong	Art Unit 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☒ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment, Paper No. 8, received on April 29, 2003.
2. Applicant's cancellation of claim 1-14 in Paper No. 8 is acknowledged.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 16 and 20 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. "storing a second set of deviations obtained independently of the first set of deviations by turning the boom from a reference position to predetermined angularly spaced intervals about a second of the joints...about the second joint". There is no support in the specification for such limitation as claimed.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 15-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The phrase "about a first of the joints" in claim 15 (line 13) and in claim 19 (line 9) are vague and indefinite, because it is unclear what is the Applicant referred to as "a first of the joints" – a first position of the joints? Similarly, claims 16 and 20, the phrase "second of the joints" is vague and indefinite.

Claim 15 recites the limitation "the first joint" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the second joint" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the first joint" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the second joint" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Rinnemaa (5,383,524).

Rinnemaa discloses a method and apparatus for correcting positioning error in rock drilling comprising: a carrier 1; a boom 3 attached turnable about joints 2 in relation to the carrier; rock drill 6; joint sensors 7; control device 14; a memory and calculating

device 8, 13. The deviation of the boom position from the theoretical position is measured at predetermined intervals (inherently discloses) as a function of the position of boom joint, and the position is corrected on the basis of the stored deviation that corresponds to the position of the joint corresponding to the drilling position (column 2, lines 62-68 and column 3, lines 1-5).

Rinnemaa further discloses that the deviation of the boom position from the calculated theoretical position is measured as a function of both angles, in horizontal and vertical directions, in a two-dimensional coordinate system, the deviation is defined as a function of the positions of the crossing points (column 3, lines 58-68 and column 4, lines 1-4).

The deviations corresponding to each joint position are measured in a certain joint position value and the calculated theoretical position of the boom is corrected on the basis of the deviations corresponding to the joint positions obtained in this way (column 3, lines 10-16).

Rinnemaa also discloses that the deviation values stored in a memory (column 7, lines 54-59); and an outer section of the boom is linearly extendable and retractable relative to the inner section (column 7, line 68 and column 8, line 1).

Response to Arguments

9. Applicant's arguments filed April 29, 2003 have been fully considered but they are not persuasive.

In response to Applicant's argument that Rinnemaa includes the use of sensors as the result of moving a beam simultaneously in multiple planes arranged

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perpendicularly to one another that is not required by Applicant's invention, it must be noted that Rinnemaa discloses the invention as claimed. The fact that it discloses additional structure not claimed is irrelevant.

In response to Applicant's argument that Rinnemaa calculates errors mathematically and are not measured. Rinnemaa measured the errors by calculating the deviation of the location of the beam. Furthermore, the applicant does not specify how the measurement of the deviation is carried out.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh K Truong whose telephone number is (703) 605-0423. The examiner can normally be reached on Mon-Thurs from 8:00 AM to 6:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I Rada can be reached on (703) 308-2187. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9301.

A handwritten signature in black ink, appearing to read 'Rinaldi I. Rada', with a long horizontal flourish extending to the right.

tkr
July 14, 2003

Rinaldi I. Rada
Supervisory Patent Examiner
Group 3700